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Medical Director's Update for Base Station Physicians' Committee
May, 2008

In-service: This year's in-service will address changes in the respiratory distress protocol, as well as overdose and behavioral issues. We will focus attention on encouraging more specific treatment of CHF with nitrates, reserving bronchodilators for COPD/asthma, adding them to presumed CHF only when wheezing is prolonged and unresponsive to nitrates. Continuous positive airway pressure or CPAP is added to the protocol for CHF and COPD/asthma. Literature shows that in the hospital ICU setting CPAP prevents intubation and likely reduces mortality. The same is thought to be true for patients in the ED. There is little outcome experience with field use, but initial reports are encouraging and the benefits are likely to extend to field use as well. Morphine will be deleted, with the focus shifting to nitrates and CPAP.

Sedation with midazolam is being added to stimulant intoxication, agitated delirium, and severe agitation under the overdose and behavioral treatment guidelines. This will help improve patient care and protect both patients and rescuers. Field treatment of patients "Tasered" is added as well.

Stroke care will be reviewed in anticipation of the new stroke destination policy taking effect in the next few months that will direct acute stroke patients to approved hospitals. The trauma decision tree has been modified by MAC, based on changes in the American College of Surgeons' "Green Book."

Safe Surrender: Fire stations are now added to the locations where a mother or other person can surrender a newborn within 72 hours of birth. Please remember the importance of obtaining the family medical history if at all possible before the mother/caretaker leaves. The mother has the right to leave without completing the history, and to send it in later via mail. We are most likely to get this critical information if done at the time, however. The county protocol is on our website.

Bypass/Off Load Delays: Bypass hours and the number of patients who bypass the requested hospital are down from earlier in the year, but still above the previous baseline. EMS continues to look at off load delays.

New EMSA Director: Dr. Steven Tharratt was named the new state EMS Authority director by the governor. Dr. Tharratt is currently the medical director for the Sacramento EMS agency and the Sacramento City and County fire departments. He is on the faculty in the pulmonary/critical care section at the University of California, Davis School of Medicine, and has been active in the poison control center network. Dr. Tharratt is currently on the EMS Commission.

He has long been active in hazardous materials and disaster response preparedness, working in the EMS community, but also with state OES and national organizations. Dr. Tharratt is widely respected. Join us in congratulating Dr. Tharratt on his appointment.

OPALS Trauma Study: The OPALS study raised new questions about the benefits of ALS procedures in trauma victims. The Ontario Prehospital Advanced Life Support (OPALS) study is a before-after systemwide controlled clinical trial conducted in 17 Canadian cities. It evaluates the benefits of adding ALS care in a variety of clinical conditions, after systems are optimized for performance.

In this study, 1,373 BLS patients were compared to 1,494 ALS patients and found to be similar in baseline characteristics such as age, percent blunt injury, severity, and percent unconscious. Overall survival was the same in both groups, 81.1% BLS vs 81.8% ALS. Among unconscious patients (GCS <9), survival was significantly lower in the ALS group (50.9% vs 60.0%). The authors called for re-evaluation of the indications for and application of prehospital ALS measures in major trauma patients. One specific finding was that prehospital intubation was associated with higher death rates.

Dan Davis wrote the editorial which accompanied the OPALS report. He reviewed some of the reasons why intubation might be associated with worse outcomes, focusing on lessons learned about hyperventilation, oxygen levels, and the intubation process, and how those might be improved.

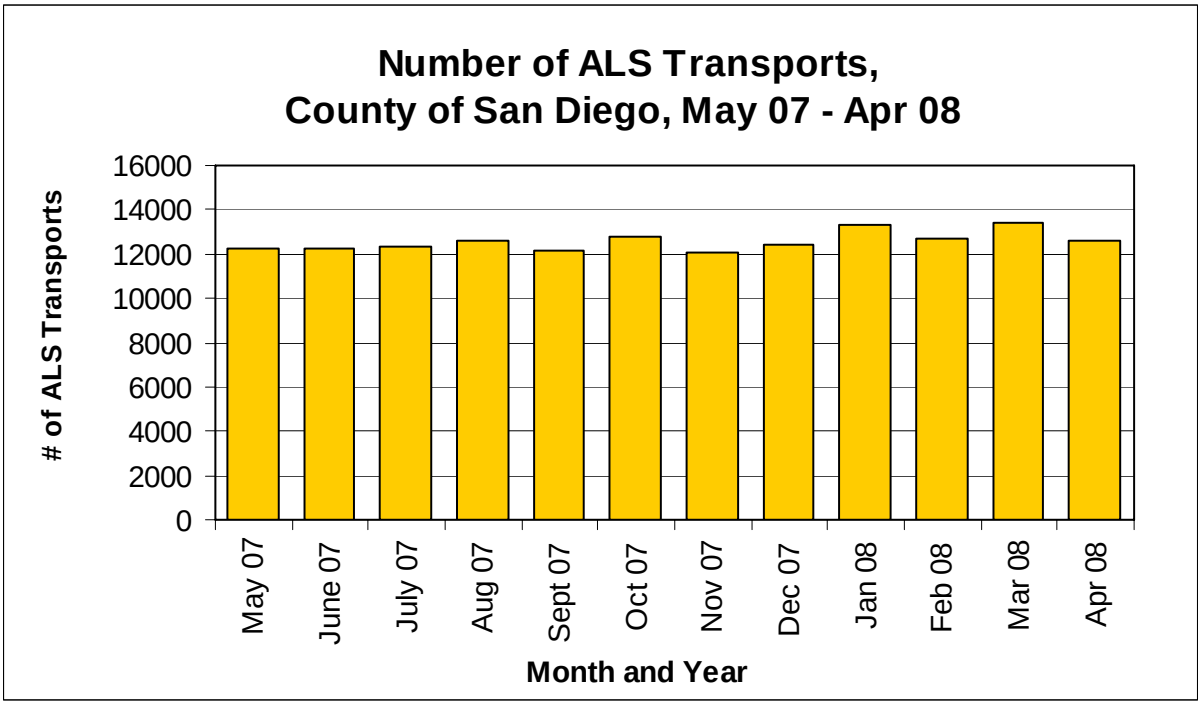
The take home message for now would emphasize not delaying transport for extended scene interventions in the severely injured patient. Also, ventilating patients slowly and carefully avoiding hyperventilation. We will keep you posted on further developments and analysis. The article may be found in the Canadian Medical Association Journal, April 22, 2008, (CMAJ 2008;178(9):1141-1152.)

Los Angeles 12-lead Study: An evaluation of early results from the Los Angeles cardiac receiving system says that the number of false positive EKGs could outnumber the true positives if the number of STEMIs is low. It is known that a positive test is likely to be false positive if the prevalence or occurrence of the disease is low. This evaluation of the LA system said that when patients had chest pain, the prevalence of STEMI was 6.6%. When the patient had “atypical” symptoms rather than chest pain, such as isolated shortness of breath, altered level of consciousness, syncope, weak and dizzy, abdominal pain, nausea and/or vomiting, seizure, head pain, or “other”, the prevalence of STEMI was 0.9%. At those levels, an EKG positive for STEMI was more likely to be false positive than true positive.

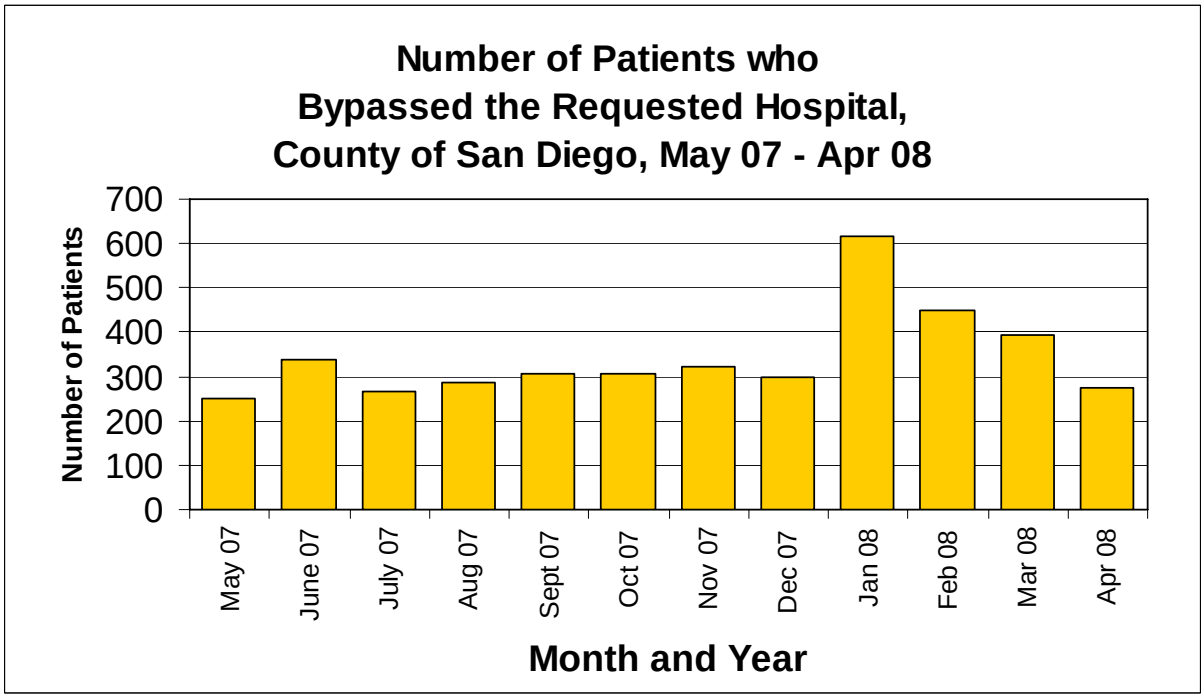
The authors point out that support for field triage and activation will erode if the majority of activations and triages are erroneous. They also say that human interpretation may not lead to substantial improvement over computer interpretation if the prevalence is low. (Youngquist et al,

Academic Emergency Medicine 2007;14:1165-1171. December 2007).

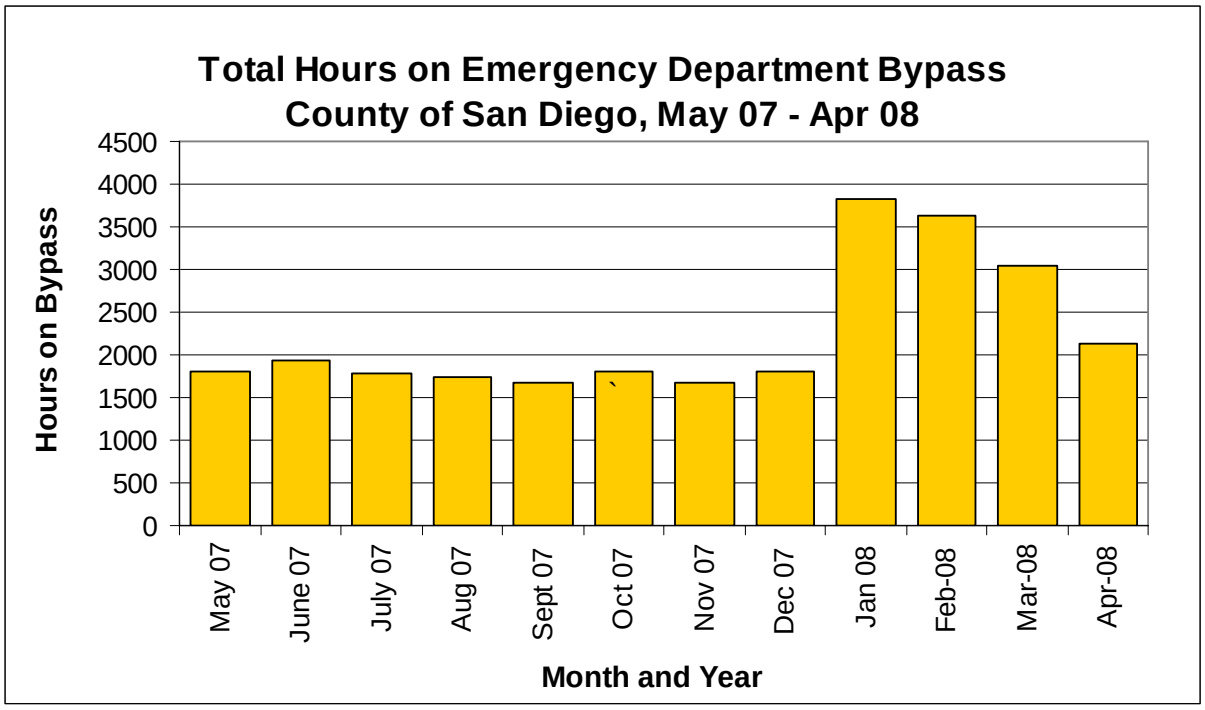
Below are the patient destination data in graphic form:



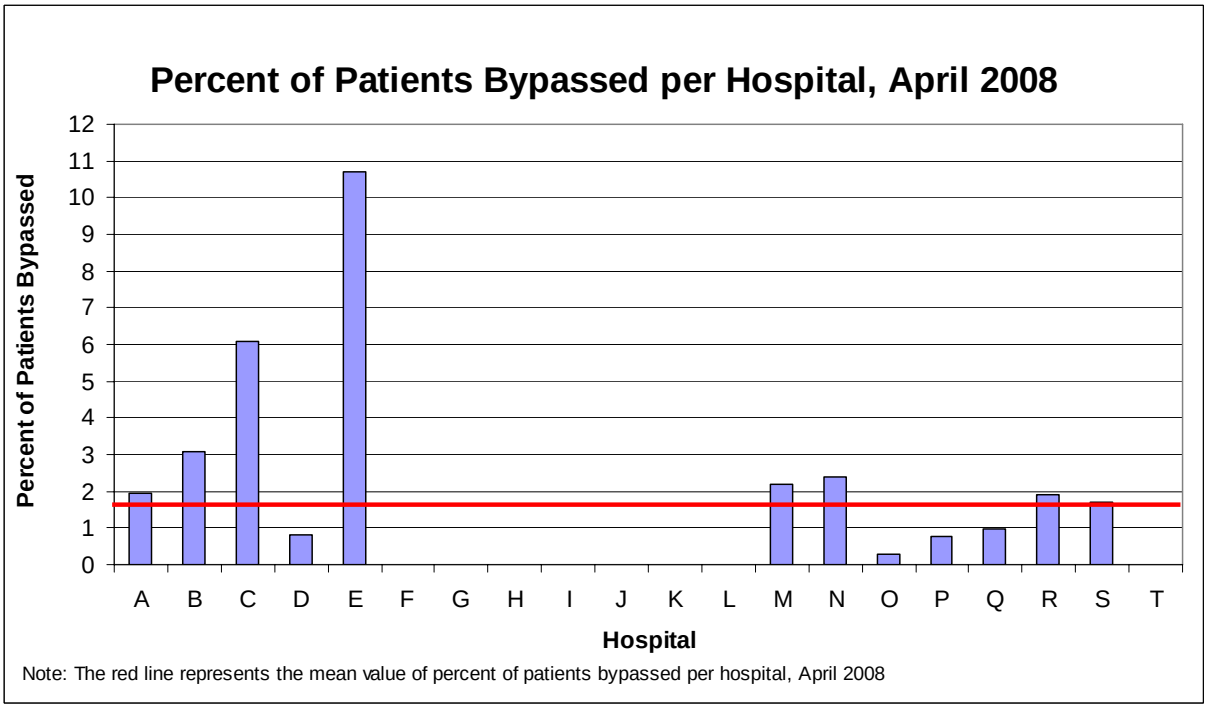
Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, MICN Records, May 2007 – Apr 2008 Note: Numbers based on Run Outcomes of Transport by Unit and Transport by Other



Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, MICN Records, May 2007 – Apr 2008 Note: Numbers based on Run Outcomes of Transport by Unit and Transport by Other



Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, MICN Records, May 2007 – Apr 2008



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